

REMARKS**Summary of the Office Action**

Claims 1, 3, 8 and 10-12 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Lee (US, 6,410,414), in view of Harada et al. (US, 6,476,491).

Claims 9 and 13 stands rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Lee and Harada et al., and further in view of Toyosawa et al. (US, 6,441,467).

Summary of the Response to the Office Action

Claims 1 and 8 are amended to further define the invention. Claims 5-7 are previously withdrawn from consideration and claims 2 and 4 are previously cancelled without prejudice or disclaimer. Accordingly, claims 1, 3 and 8-13 are presently pending for consideration.

All Claims Define Allowable Subject Matter

Claims 1, 3, 8 and 10-12 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Lee (US, 6,410,414), in view of Harada et al. (US, 6,476,491). And, claims 9 and 13 stands rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Lee and Harada et al., and further in view of Toyosawa et al. (US, 6,441,467). Applicants respectfully traverse the rejections for at least the following reasons.

With respect to independent claims 1 and 8, as amended, Applicants respectfully submit that none of the cited references, whether taken singly or in combination, teaches or suggests the features including at least “a portion of the planarized polyimide is removed at a part of a region of the metal interconnect layer and a bonding wire is connected to the region of the metal interconnect layer, wherein a projection area of said region connected with the bonding wire is overlapped with said functional semiconductor device.”

Applicants respectfully submit that the present invention is directed to a semiconductor device configuration that enables the bonding region to be placed just above the area where the MOS device is formed. Applicants respectfully note that the metal material such as aluminum or copper is harder than the gold, thus placing the active device beneath the metal interconnect layers made of aluminum or copper may cause deterioration of the metal interconnect layer itself and the device area if an unexpected external force is applied to the metal interconnect layer. Therefore, using the metal interconnect layer such as aluminum layer or copper layer do not achieve the above-mentioned configuration.

As an example, paragraph [0010] and FIG. 6 of the original specification disclose the drawback of employing the metal interconnect layer made of aluminum, where the passivation film having the appropriate thickness is required to protect the aluminum interconnect of the foundation, resulting the increased time to form the passivation film. In addition, the bonding pad 102 shown in FIG. 4 of Lee is formed offset from the external terminal 114 and the bonding wire 209 shown in FIG. 7F of Harada et al. is formed offset from the semiconductor element 6. That is the bonding wire/pad of Lee and Harada et al. are not formed overlapping the active device area. As argued previously, Applicants respectfully submit that the present invention provides the MOS FET 15 at the area beneath the metal interconnect layer by employing the soft metal material. Furthermore, Applicants respectfully submit that none of the cited references appear to teach or suggest employing gold as the material for the metal interconnect layer to reduce the lateral dimension of the semiconductor device as disclosed in the present invention.

As listed in MPEP §2143 Option (A), to establish a prima facie obviousness, there must be a finding that the prior art included each element claimed, a finding that one of ordinary skill in the art could have combined the elements as claimed by known methods, and that one of

ordinary skill in the art would have recognized that the results of the combination were predictable. Accordingly, Applicants respectfully assert that the Office has not established a *prima facie* case of obviousness and that the rejection of claims under 35 U.S.C. §103(a) should be withdrawn.

Furthermore, Applicant respectfully submits that Harada et al. fails to cure the deficiencies of Lee, Harada et al. and Toyosawa et al. fails to cure the deficiencies of Lee, and Toyosawa et al. fails to cure the deficiencies of Lee and Harada et al.

#

In light of the arguments presented above, Applicants respectfully request that the rejection of claims under 35 U.S.C. §103(a) be withdrawn. Moreover, Applicants respectfully submit that dependent claims 3 and 9-13 are allowable with regard the amended independent claims 1 and 8 from which they respectfully depend, as well as the individual features that dependent claims 3 and 9-13 recite.

CONCLUSION

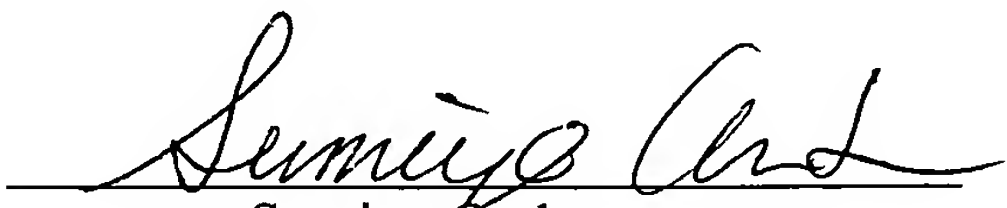
Applicants respectfully request that this Amendment under 37 C.F.R. § 1.116 be entered by the Examiner, placing all pending claims in condition for allowance. Applicants submit that the claim amendments do not raise new issues or necessitate additional search of the art by the Examiner.

Should the Examiner feel that there are any issues outstanding after consideration of this response, the Examiner is invited to contact Applicants' undersigned representative to expedite the prosecution. If there are any other fees due in connection with the filing of this response, please charge the fees to our Deposit Account No. 50-0310.

If a fee is required for an extension of time under 37 C.F.R. 1.136 not accounted for above, such an extension is requested and the fee should also be charged to our Deposit Account.

Respectfully submitted

MORGAN, LEWIS & BOCKIUS LLP

By: 
Sumiyo Onda
Reg. No. 62,166

Dated: May 28, 2008

CUSTOMER NO. 009629
MORGAN, LEWIS & BOCKIUS LLP
1111 Pennsylvania Avenue, N.W.
Washington, D.C. 20004
Telephone: (202) 739-3000
Facsimile: (202) 739-3001